

Date: \_\_\_\_\_

## Data Sheet: Is Dead Horse Bay *Dead* or *Alive*?

**Introduction:** You are investigators on a quest to find out the mystery behind Dead Horse Bay. Your job is to figure out if the water is good for fish or other organisms to live in. We will do experiments to test the water quality. There are five fish listed on these charts. Your job is to mark down which fish can live in this bay.

## Hypothesis:

**Instructions:** Measure the air temperature, wind speed, and turbidity. Now, it is time to test the water! Collect a sample of water in the bucket and measure the water temperature, pH, salinity, and dissolved oxygen.

### *On Land:*

**Air Temperature:**\_\_\_\_\_

**Wind Speed:** \_\_\_\_\_ Calm (1-3 mph) \_\_\_\_\_ Breezy (4-15 mph) \_\_\_\_\_ Windy (16-30 mph) \_\_\_\_\_ Gale (> 30 mph)

***In Water:***

**Turbidity:**                      \_\_\_\_\_ cm                      \_\_\_\_\_ cm                      \_\_\_\_\_ cm  
    1<sup>st</sup> Reading                      2<sup>nd</sup> Reading                      3<sup>rd</sup> Reading

**Place an “X” on the number in the chart that you received for each test. Make sure you mark every chart!**

Atlantic Menhaden Fish			
Water Temperature (°C)	Dissolved Oxygen (mg/L)	Salinity (ppt)	pH
0	0	4	1
5		6	2
10		8	3
15		10	4
20		12	5
25		14	6
30	4	16	7
35		18	8
40		20	9
45		22	10
50		24	11
55		26	12
60		28	13
65	8	30	14

Atlantic Silverside Fish			
Water Temperature (°C)	Dissolved Oxygen (mg/L)	Salinity (ppt)	pH
0	0	6	1
5		8	2
10		10	3
15		12	4
20		14	5
25		16	6
30	4	18	7
35		20	8
40		22	9
45		24	10
50		26	11
55		28	12
60		30	13
65	8	32	14

**Chart Key:**

**Cannot Live -Most Die -Over 50 % die → -Survival Possible → 90-100% Survival**

**Chart Key:**

-Cannot Live 
  -Most Die 
  -Over 50 % die 
  → 
  → 
  90-100% Survival

Mummichog			
Water Temperature (°C)	Dissolved Oxygen (mg/L)	Salinity (ppt)	pH
0	0	4	1
5		6	2
10		8	3
15		10	4
20		12	5
25		14	6
30	4	16	7
35		18	8
40		20	9
45		22	10
50		24	11
55		26	12
60		28	13
65	8	30	14

Striped Killifish			
Water Temperature (°C)	Dissolved Oxygen (mg/L)	Salinity (ppt)	pH
0	0	4	1
5		6	2
10		8	3
15		10	4
20		12	5
25		14	6
30	4	16	7
35		18	8
40		20	9
45		22	10
50		24	11
55		26	12
60		28	13
65	8	30	14

Tautog			
Water Temperature (°C)	Dissolved Oxygen (mg/L)	Salinity (ppt)	pH
0	0	4	1
5		6	2
10		8	3
15		10	4
20		12	5
25		14	6
30	4	16	7
35		18	8
40		20	9
45		22	10
50		24	11
55		26	12
60		28	13
65	8	30	14

Make a hypothesis predicting which fish you think you will find in the water. Based on the charts and your numbers, what fish will you find?

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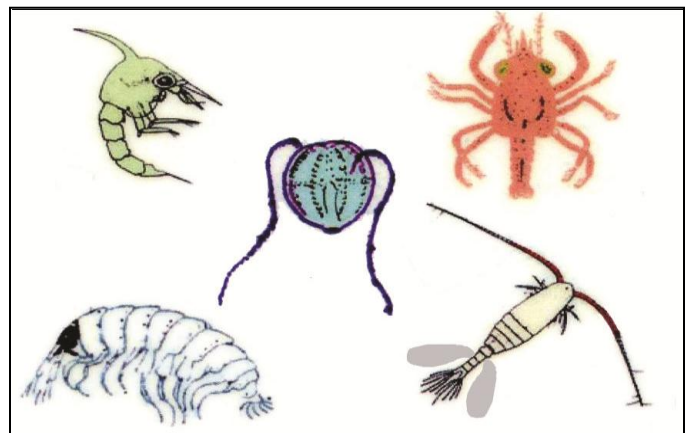
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***A Closer Look...***

There are other organisms in the bay that help the fish to survive. They provide food and even oxygen for the fish. These tiny creatures are called plankton! Use your plankton net to catch the plankton and put them under your microscope. Circle the plankton you've observed.



*Now.....*

***Is Dead Horse Bay Dead or Alive?***